

Notice of Allowability

Application No.

09/864,779

Examiner

Jessica L. Rossi

Applicant(s)

TAYLOR ET AL.

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview Summary, 5/28/04.
2. ☒ The allowed claim(s) is/are 1, 3, 7, 9-17, 19, 23, 41, 42, 46-54 and 56-61.
3. ☒ The drawings filed on 24 May 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 05282004.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Hoover on 5/27/04.

2. The application has been amended as follows:

Claims 21-22, 24, 43-44, and 55: canceled.

Claim 23, line 1: "21" was deleted and --17-- was inserted.

Claim 54, line 3: --glass-- was inserted before "fibers".

Claim 54, line 6: "the" was deleted before "bonding" and --a-- was inserted.

Claim 60, line 2: --glass-- was inserted before "fibers".

Claim 61, line 2: "the" was deleted before "bonding" and --a-- was inserted.

3. The following is an examiner's statement of **reasons for allowance**:

With respect to claim 1, the prior art fails to teach or suggest a method for preparing a laminate comprising **impregnating** a first laminae comprising a **non-woven mat of fibers** with an **adhesive composition consisting essentially of hemicellulose and water** and bonding the first laminae to a second laminae, as set forth in paragraph 14 of the previous office action dated 12/10/03.

With respect to claim 17, the prior art fails to teach or suggest a method for preparing a prepreg comprising **impregnating** a substrate comprising a **non-woven mat of fibers** with an

adhesive composition consisting essentially of hemicellulose and water, wherein the hemicellulose comprises corn hull hemicellulose.

With respect to claim 41, the prior art fails to teach or suggest a method for preparing a laminate comprising **impregnating** a first laminae comprising a **non-woven mat of fibers** with a liquid **adhesive composition consisting essentially of hemicellulose and water** and bonding the first laminae to a second laminae, as set forth in paragraph 14 of the previous office action dated 12/10/03.

Regarding claims 1, 17, and 41, US 4071651 to Hicklin (of record) teaches impregnating a middle fibrous web with a sizing agent comprising wax/rosin and hemicellulose and water, impregnating outer fibrous webs with a stiffening agent comprising starch, placing the outer webs on both sides of the middle web, and laminating/consolidating the same by means of heat and pressure. The sizing agent prevents the stiffening agents from penetrating into the middle web while also facilitating bonding between the webs (column 1, lines 49-51 and 60-62; column 3, lines 12-13; column 4, lines 51-53). However, the skilled artisan would have appreciated that the wax/rosin also facilitates bonding between the webs and therefore the adhesive composition of Hicklin does not consist essentially of hemicellulose and water.

With respect to claim 54, the prior art fails to teach or suggest a method for preparing a laminate comprising **impregnating** a first laminae comprising a **non-woven mat of glass fibers** with an **adhesive composition comprising corn hull hemicellulose**, wherein the hemicellulose is present in an amount of at least 45% by dry weight of the bonding agent in the adhesive composition, and bonding the first laminae to a second laminae.

With respect to claim 60, the prior art fails to teach or suggest a method for preparing a pregreg comprising **impregnating** a substrate comprising a **non-woven mat of glass fibers** with an **adhesive** composition comprising **corn hull hemicellulose**, wherein the hemicellulose is present in an amount of at least 45% by dry weight of the adhesive composition.

Regarding claims 54 and 60, the Hicklin '651 reference discussed above specifically teaches the webs being cellulosic fibrous webs (column 1, lines 10-11 and 19-20) and therefore teaches away from a non-woven mat of glass fibers.

Also regarding claims 54 and 60, US 4587285 to Ayla (of record) teaches an adhesive composition comprising hemicellulose and water wherein the hemicellulose is derived from vegetable materials and is present in the adhesive in an amount of 10-90% by weight (column 2, lines 56-65). The reference teaches the adhesive composition being used for a variety of purposes including impregnating a cellulosic web and bonding wood veneers (column 1, lines 9-12; column 5, lines 10-20). However, the reference fails to teach or suggest a non-woven mat of glass fibers, wherein the skilled artisan reading the reference as a whole would have appreciated that the reference teaches away from such.

Regarding claim 60, US 4514532 to Hsu (of record) teaches impregnating a non-woven mat of glass fibers with an adhesive composition comprising hemicellulose in an amount of at least 43-63% by weight (column 2, lines 28-40 and 46; column 3, lines 38-40; column 9, lines 8-12). However, the reference expressly states that the unique component of the adhesive composition is a concentrated aqueous extract of carbohydrate (sugars and hemicellulose) and phenolic materials from steam digestion of wood chips (column 2, lines 56-59). Therefore, Hsu

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fails to teach or suggest corn hull hemicellulose, wherein the skilled artisan reading the reference as a whole would have appreciated that the reference teaches away from such.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **571-272-1223**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D. Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jessica L. Rossi
Patent Examiner
Art Unit 1733



JEFF H. ATTERBERG
PRIMARY EXAMINER
GROUP 1300